



DLA PIPER RUDNICK GRAY CARY U.S. LLP

1200 NINETEENTH STREET, NW  
WASHINGTON, DC 20036-2412  
TELEPHONE: 202-861-3900  
FACSIMILE: 202-223-2085

DOCKET NO.: 5398-017-27 CONT

ASSISTANT COMMISSIONER FOR PATENTS  
PO BOX 1450  
ALEXANDRIA, VA 22313-1450

Re: Serial No.: 10/666,997  
Applicant(s): Carol CARTER, et al.  
Filing Date: September 18, 2003  
For: TSG101 AS INHIBITOR OF HIV PRODUCTION  
Group Art Unit: 1648  
Examiner:

SIR:

Attached hereto for filing are the following papers:

Information Disclosure Statement  
PTO-1449  
Cited Documents (50)

Our check in the amount of \$0.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary extension of time to make the filing of the attached documents timely, please charge or credit the difference to Deposit Account No. 50-1442. Further, if these papers are not considered timely filed, then a request is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY U.S. LLP

Steven B. Kelber  
Attorney of Record  
Registration No.: 30,073

Michael Ye, Ph.D.  
Registration No.: 47,195

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: Carol CARTER, et al.

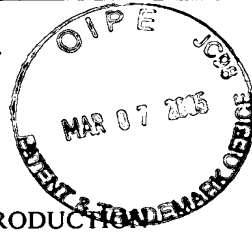
GROUP ART UNIT: 1648

SERIAL NUMBER: 10/666,997

EXAMINER:

FILED: September 18, 2003

FOR: TSG101 AS INHIBITOR OF HIV PRODUCTION



INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97

Assistant Commissioner for Patents  
PO BOX 1450  
ALEXANDRIA, VA 22313-1450

Sir:

Applicant(s) wish(es) to disclose the following information.

REFERENCES

- ☒ Applicant(s) wish(es) to make of record the documents listed on the attached Form PTO-1449. Copies of the listed documents are attached, where required, as are either statements of relevancy or any readily available full or partial English translations of any non-English-language documents.

RELATED CASES

- ☐ Attached is a list of Applicant's(s') pending applications and issued patents which may be related to the present application. Copies of the documents, where required, are attached along with Form PTO-1449.

CERTIFICATION

The undersigned certifies that

- ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application for the first time (to the knowledge of the undersigned, having made reasonable inquiry) not more than three months prior to the filing of this statement.
- ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

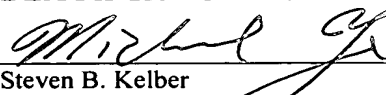
- ☐ without fee and within three months of the filing date of the application.
- ☐ without fee and within three months of the date of entry of the U.S. national stage.
- ☒ without fee and before the mailing date of a first Office Action on the merits (to the knowledge of the undersigned).
- ☐ without fee and with the appropriate certification above.
- ☐ without fee and with a new CPA application.
- ☐ without fee and with a Request for Continued Examination.
- ☐ with fee and before the mailing date of any Final Office Action, Notice of Allowance or an action that otherwise closes prosecution (to the knowledge of the undersigned).
- ☐ with fee, appropriate certification above, and before payment of the Issue Fee.

DEPOSIT ACCOUNT

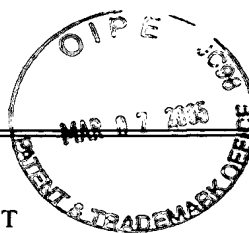
- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to Deposit Account No. 50-1442.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY U.S. LLP

  
\_\_\_\_\_  
Steven B. Kelber  
Attorney of Record  
Registration No. 30,073  
Michael Ye, Ph.D.  
Registration No. 47,195

1200 Nineteenth Street, N.W.  
Washington, DC 20036-2412  
Telephone No. (202) 861-3900  
Facsimile No. (202) 223-2085



Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		DOCKET NO. 5398-017-27 CONT		SERIAL NO. 10/666,997	
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)				APPLICANT Carol CARTER, et a.			
				FILING DATE September 18, 2003		GROUP ART UNIT 1648	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,807,995	09/15/98	COHEN, et al.			
	AB	5,892,016	04/06/99	BRIE, et al.			
	AC	5,679,523	10/21/97	LI, et al.			
	AD	5,891,668	04/06/99	LI, et al.			
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AE	Ott, et al., "Cytoskeletal Proteins inside Human Immunodeficiency Virus Type 1 Virions", Journal of Virology, Vol. 70, No. 11, 1996.					
	AF	Bryant, et al., "Myristoylation-dependent replication and assembly of human immunodeficiency virus 1", Proc. Natl. Acad. Sci. USA, Vol. 87, pp. 523-527, 1990.					
	AG	Camaur, et al., "Human Immunodeficiency Virus Matrix Tyrosine Phosphorylation: Characterization of the Kinase and Its Substrate Requirements", Journal of Virology, Vol. 71, No. 9, pp. 6834-6841, 1997.					
	AH	Göttlinger, et al., "Role of capsid precursor processing and myristoylation in morphogenesis and infectivity of human immunodeficiency virus type 1", Proc. Natl. Acad. Sci. USA, Vol. 86, pp. 5781-5785, 1989.					
	AI	Ott, et al., Ubiquitin Is Covalently Attached to the p6 <sup>Gag</sup> Proteins of Human Immunodeficiency Virus Type 1 and Simian Immunodeficiency Virus and to the P12 <sup>Gag</sup> Protein of Moloney Murine Leukemia Virus", Journal of Virology, Vol. 72, No. 4, pp. 2962-2968, 1998.					
	AJ	Wills, et al., "An Assembly Domain of the Rous Sarcoma Virus Gag Protein Required Late in Budding", Journal of Virology, Vol. 68, No. 10, pp. 6605-6618, 1994.					
	AK	Göllinger, et al., "Effect of mutations affecting the p6 gag protein on human immunodeficiency virus particle release", Proc. Natl. Acad. Sci. USA, Vol. 88, pp. 3195-3199, 1991.					
	AL	Huang, et al., "p6 <sup>Gag</sup> Is Required for Particle Production from Full-length Human Immunodeficiency Virus Type 1 Molecular Clones Expressing Protease", Journal of Virology, Vol. 69, No. 11, p. 6810-6818, 1995.					
	AM	Schubert, et al., "Proteasome inhibition interferes with Gag polyprotein processing, release, and maturation of HIV-1 and HIV-2", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 24, pp. 13057-13062, 2000.					
	AN	Strack, et al., "A role for ubiquitin ligase recruitment in retrovirus release", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 24, 13063-13068, 2000.					
EXAMINER					DATE CONSIDERED		
*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.							

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	DOCKET NO.  5398-017-27 CONT	SERIAL NO.  10/666,997
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)		APPLICANT  Carol CARTER, et a.	
		FILING DATE  September 18, 2003	GROUP ART UNIT  1648
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)			
	BA	Vogt, "Ubiquitin in retrovirus assembly: Actor of bystander?", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 24, p. 12945-12947, 2000.	
	BB	Ott, et al., "Ubiquitination of HIV-1 and MuLV Gag", Virology, Vol. 278, p. 111-121, 2000.	
	BC	Patnaik, et al., "Ubiquitin is part of the retrovirus budding machinery", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 24, pp. 13069-13074, 2000.	
	BD	Lemmon, et al., "Sorting in the endosomal system in yeast and animal cells", Abstract Only, Current Opinion in Cell Biology, Vol. 12, No. 4, pp. 457-466, 2000.	
	BE	Xie, et al., "Cell cycle-dependent subcellular localization of the TSG101 protein and mitotic and nuclear abnormalities associated with TSG101 deficiency", Proc. Natl. Acad. Sci. USA, Vol. 95, pp. 1595-1600, 1998.	
	BF	Zhong, et al., "Perturbation of TSG101 protein affects cell cycle progression", Abstract Only, Cancer Res., Vol. 58, No. 13, pp. 2699-2702, 1998.	
	BG	Harty, et al, "A PPxY motif within the VP40 protein of Ebola virus interacts physically and functionally with a ubiquitin ligase: Implications for filovirus budding", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 25, pp. 13871-13876, 2000.	
	BH	Ikeda, et al., "The Epstein-Barr Virus Latent Membrane Protein 2A PY Motif Recruits WW Domain-Containing Ubiquitin-Protein Ligases", Abstract Only, Virology, Vol. 268, No. 1, pp. 178-191, 2000.	
	BI	Yasuda, et al., "A Proline-Rich Motif (PPPY) in the Gag Polyprotein of Mason-Pfizer Monkey Virus Plays a Maturation-Independent Role in Virion Release", Journal of Virology, Vol. 72, No. 5, pp. 4095-4103, 1998.	
	BJ	Harty, et al., "A Proline-Rich Motif within the Matrix Protein of Vesicular Stomatitis Virus and Rabies Virus Interacts with WW Domains of Cellular Proteins: Implications for Viral Budding", Journal of Virology, Vol. 73, No. 4, pp. 2921-2929, 1999.	
	BK	Parent, et al., "Positionally Independent and Exchangeable Late Budding Functions of the Rous Sarcoma Virus and Human Immunodeficiency Virus Gag Proteins", Journal of Virology, Vol. 69, No. 9, pp. 5455-5460, 1995.	
	BL	Li, et al., "tsg101: A Novel Tumor Susceptibility Gene Isolated by Controlled Homozygous Functional Knockout of Allelic loci in Mammalian Cells", Cell, Vol. 85, pp. 319-329, 1996.	
	BM	Watanabe, et al., "A Putative Tumor Suppressor, TSG101, Acts as a Transcriptional Suppressor through Its Coiled-Coil Domain", Abstract Only, Biochemical and Biophysical Research Communications, Vol. 245, o. 3, pp. 900-905, 1998.	
	BN	Hittelman, et al., "Differential regulation of glucocorticoid receptor transcriptional activation via AF-1-associated proteins", EMBO Journal, Vol. 18, No. 19, p. 5380-5388, 1999.	
EXAMINER		DATE CONSIDERED	
*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.			

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	DOCKET NO.  5398-017-27 CONT		SERIAL NO.  10/666,997
		APPLICANT  Carol CARTER, et a.		
		FILING DATE  September 18, 2003	GROUP ART UNIT  1648	
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)				
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)				
	CA	Li, et al., "A TSG101/MDM2 regulatory loop modulates MDM2 degradation and MDM2/p63 feedback control", Proc. Natl. Acad. Sci. USA, Vol. 98, No. 4, pp. 1619-1624, 2001.		
	CB	Pornillos, et al., "Structure and functional interactions of the TSG101 UEV domain", EMBO Journal, Vol. 21, No. 10, pp. 2397-2406, 2002.		
	CC	Felding-Habermann, et al., "Integrin activation control metastasis in human breast cancer", Proc. Natl. Acad. Sci. USA, Vol. 98, No. 4, p. 1853-1858, 2001.		
	CD	Feng, et al., "TSG101 Protein Steady-State Level Is Regulated Posttranslationally by an Evolutionarily Conserved COOH-Terminal Sequence", Cancer Research, Vol. 60, pp. 1736-1741, 2000.		
	CE	Bishop, et al., "TSG101/Mammalian VPS23 and Mammalian VPS28 Interact Directly and Are Recruited to VPS4-induced Endosomes", Journal of Biological Chemistry, Vol. 276, No. 15, pp. 11735-11742, 2001.		
	CF	Li, et al., "Yeast Mutants Affecting Possible Quality Control of Plasma Membrane Proteins", Molecular and Cellular Biology, Vol. 19, No. 5, pp. 3588-3599, 1999.		
	CG	Merrifield, "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide", First Page Only, Journal of American Chemical Society, Vol. 85, pp. 2149-2154, 1963.		
	CH	Durfee, et al., "The retinoblastoma protein associates with the protein phosphatase type 1 catalytic subunit", Genes Dev., Vol. 7, No. 4, pp. 555-569, 1993.		
	CI	Li, et al., "The TSG101 Tumor Susceptibility Gene Is Located in Chromosome 11 Band p15 and Is Mutated in Human Breast Cancer", Cell, Vol. 88, pp. 143-154, 1997.		
	CJ	Smith, et al., "Human Immunodeficiency Virus Type 1 Pr55 <sup>gag</sup> and Pr160 <sup>gag-pol</sup> Expressed from a simian Virus 40 Late Replacement Vector Are Efficiently Processed and Assembled into Viruslike Particles", Journal of Virology, Vol. 64, No. 6, pp. 2743-2750, 1990.		
	CK	Ehrlich, et al., "Partitioning of HIV-1 Gag and Gag-Related Proteins to Membranes", Abstract Only, Biochemistry, Vol. 35, No. 13, pp. 3933-3943, 1996.		
	CL	Ratner, et al., "Complete nucleotide sequence of the AIDS virus, HTLV-III, Abstract Only, Nature, Vol. 313, pp. 277-284, 1985.		
	CM	Ehrlich, et al., "Assembly of Recombinant Human Immunodeficiency Virus Type 1 Capsid Protein In Vitro", Journal of Virology, Vol. 66, No. 8, pp. 4874-4883, 1992.		
	CN	Li, et al., "The TSG101 Tumor Susceptibility Gene Is Located in Chromosome 11 Band p15 and Is Mutated in Human Breast Cancer", Cell, Vol. 88, No. 1, pp. 143-154, 1997.		
	CO	Frankel, "HIV-1: Fifteen Proteins and an RNA", Abstract Only, Annual Reviews, Vol. 67, pp. 1-25, 1998.		
EXAMINER				DATE CONSIDERED
*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.				

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	DOCKET NO.  5398-017-27 CONT	SERIAL NO.  10/666,997
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)		APPLICANT  Carol CARTER, et a.	
		FILING DATE  September 18, 2003	GROUP ART UNIT  1648
		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)	
	DA	Markus, et al., "Proline Residues in Human Immunodeficiency Virus Type 1 pg <sup>Gag</sup> Exert a Cell Type-Dependent Effect on Viral Replication and Virion incorporation of Pol Proteins", Journal of Virology, Vol. 73, No. 6, pp. 4696-4704, 1999.	
	DB	Lemmon, et al., "Sorting in the endosomal system in yeast and animal cells", Abstract Only, Current Opinion in Cell Biology, Vol. 12, No. 4, p. 457-466, 2000.	
	DC	Jentsch, et al., "Ubiquitin-conjugating enzymes: novel regulators of eukaryotic cells", Abstract Only, Trends in Biochemical Sciences, Vol. 15, No. 5, pp. 195-198, 1990.	
	DD	Shih, et al., "Monoubiquitin carries a novel internalization signal that is appended to activated receptors", EMBO Journal, Vol. 19, No. 2, pp. 187-198, 2000.	
	DE	Hershko, et al., "The Ubiquitin System", Abstract Only, Annual Reviews, Vol. 67, pp. 425-479, 1998.	
	DF	Kay, et al., "The importance of being proline: the interaction of proline-rich motifs in signaling proteins with their cognate domains", The FASEB Journal, Vol. 14, pp. 231-241, 2000.	
	DG	Townsend, et al., "Dominant-negative cyclin-selective ubiquitin carrier protein E2-C/UbcH10 blocks cells in metaphase", Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 2362-2367, 1997.	
	DH	Harty, et al., "A PPxY motif within the VP40 protein of Ebola virus interacts physically and functionally with a ubiquitin ligase: Implications for filovirus budding", Proc. Natl. Acad. Sci. USA, Vol. 97, No. 25, pp. 13871-13876, 2000.	
	DI	Sutton, et al., "Human Immunodeficiency Virus Type 1 Vectors Efficiently Transduce Human Hematopoietic Stem Cells", Journal of Virology, Vol. 72, No. 7, pp. 5781-5788.	
	DJ	Alland, et al., "Dual Myristylation and Palmitoylation of Src Family Member p59 <sup>lck</sup> Affects Subcellular Localization", The Journal of Biological Chemistry, Vol. 269, No. 24, pp. 16701-16705, 1994.	
	DK	Vodicka, et al., "Indicator Cell Lines for Detection of Primary Strains of Human and Simian Immunodeficiency Viruses", Abstract Only, Virology, Vol. 233, No. 1, pp. 193-198, 1997.	
EXAMINER		DATE CONSIDERED	
*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.			